

MULTIPLE EYELID LUMPS IN INFANT WITH DYSLIPIDEMIA IN RESOURCE-LIMITED SETTING ANAMBAS ARCHIPELAGO DISTRICT

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ABSTRACT

Objective: Our aim was to present a case of recurrent multiple eyelid lumps in infant with dyslipidemia in limited resources area.

Case Report: We presented a case report about a 3-year-old boy, good nutrition, came to our hospital with multiple painless redness lumps in his eyelids. The child had a similar complaint for three times in the last seven months in different site. No history of atopy, chronic blepharitis, trauma or eyelid surgery. Laboratory findings showed elevated level of cholesterol. We assessed this patient recurrent multiple hordeolum with risk factor dyslipidemia. For therapeutic intervention we gave initial treatment with antibiotic erythromycin 50 mg/kgbw/day divided 3 doses, antibiotic topical and warm compresses several times. Managing dyslipidemia we planned to modification of life style, diet and activities for two weeks, then evaluation the level of cholesterol. We evaluated and educated the patient's parent to refer him to an ophthalmologist for further management. But we had difficulty referring patient to the provincial hospital with ophthalmologist due to the islands' geographical location, infrequent and weather-affected transportation, as well as family economics.

Discussions: A hordeolum is a common inflammation of the eyelid margin. Recurrence of hordeolum is usually associated with underlying causes such as systemic disease. Dyslipidemia leads to hypersecretion of meibum which will cause high concentrated meibum in Meibomian glands, so that leads to blockage of ducts of Meibomian glands and Meibomian gland dysfunction (MGD). Initial treatment of hordeolum is indeed conservative, typically limited to application of warm compresses several times a day and topical antibiotics.

Conclusions: Dyslipidemia is usually associated with recurrent hordeolum. The management of hordeolum is conservative.

Keywords: eyelid disease, hordeolum, chalazion, dyslipidemia

INTRODUCTION

A hordeolum is a common inflammation of the eyelid margin. It presents as a red, painful, swollen furuncle with an acute onset and is usually caused by a staphylococcal infection but other organisms normally found on the skin may be precipitating factors.^{1,7} The inflammation can be internal, affecting the Meibomian Glands, or external, affecting the glands of Zeis or Moll.²

External hordeola are more commonly known as styes. In many cases, the lesion drains spontaneously and resolves untreated; however, the inflammation can spread to other ocular glands or tissues, and recurrences are common.^{1,8}

If unresolved, an acute internal hordeolum can become chronic or can developed into a chalazion.^{1,2} Risk factor that may cause recurrent hordeolum infection include seborrheic dermatitis, rosacea, chronic blepharitis, high lipid blood concentration, poor lid hygiene, stress, eyelid trauma, eyelid surgery.^{3,4} Early treatment and manage the risk factors may avoid severe complications, such as eyelid deformity, systemic involvement, astigmatism, and blindness.^{1,2,8}

CASE REPORT

A 3-year-old boy, good nutrition, from a rural area, was admitted in a polyclinic of

District Hospital with multiple lumps in his eyelids. The mother reported that painless lumps in the right upper and lower eyelids had appeared in the last ten days without purulent secrets. The mother denied her child had fever, worsening of visual acuity, or pain due to eye movements.

Previously, in the last seven months, the child had a similar complaint for three times. The painless and redness left lower

and upper eyelids lumps appeared, then he got medicine such as antibiotics systemic and eye topical ointment in primary health care. After two weeks, the lumps resolved, but appeared in the other side. The last complaint occurred in the last month. No history of atopy, trauma or eyelid surgery. History of chronic blepharitis was denied.



Figure 1. A 3-year-old boy with multiple lumps in his eyelids

Vital signs at the time of hospital admission were as follows: systemic blood pressure = 100/70 mmHg, cardiac frequency = 99 bpm, and body temperature = 36,7°C. The full blood count presented a white blood count of leukocytes = 9.200 mm³ (neutrophils = 5.612 mm³, eosinophils = 0 mm³, basophils = 0 mm³, lymphocytes = 3.036 mm³, and monocytes = 552 mm³). All of them were within the normal range. Blood glucose 99 mg/dL, total cholesterol 228 mg/dL. No other examination can be performed because of limited resources in our hospital.

We assessed this patient recurrent multiple hordeolum with risk factor dyslipidemia. For therapeutic intervention we gave initial treatment with antibiotic erythromycin 50 mg/kgbw/day divided 3 doses, antibiotic topical and warm compresses several times. Managing

dyslipidemia we planned to modification of life style, diet and activities for two weeks, then evaluation the level of cholesterol. We evaluated and educated the patient's parent to refer him to an ophthalmologist for further management. But we had difficulty referring patient to the provincial hospital with ophthalmologist due to the islands' geographical location, infrequent and weather-affected transportation, as well as family economics.

DISCUSSION

The present study describes a case of recurrent multiple eyelid lumps in infant with dyslipidemia. Hordeolum is one of the most common diseases of the eye adnexa. Patients with different ages can be affected, and the onset is either spontaneous or associated with risk factors such as lid hygiene, blepharitis, or systemic disease.⁵ The size of swelling

might be a direct indicator of the severity of the infection and recurrence is usually associated with underlying causes including blepharitis, acne rosacea, trichiasis, cicatricial ectropion, and systemic disease.²

Dyslipidemia is defined as a disorder of lipid metabolism that manifests as an elevation of total cholesterol, Low-Density Lipoprotein (LDL), and triglyceride levels and as a decrease in High-Density Lipoprotein (HDL) levels in the blood. Dyslipidemia leads to hypersecretion of meibum which will cause high concentrated meibum in Meibomian glands, so that leads to blockage of ducts of Meibomian glands and Meibomian gland dysfunction (MGD) happened, so it will increase the risk for blepharitis and subsequently chalazion.^{3,8} A systematic review proved that a strong positive correlation exists between dyslipidemia and MGD.⁴

Most cases of hordeolum have a spontaneous resolution, not demanding professional medical treatment. In many cases, the lesions can spontaneously drain without any treatment. Warm compresses are also of benefit, as is massage to the area. These are often seen as the gold standard. Warm compresses are aimed at softening the granulomatous tissue and facilitating drainage. Lid massage is intended to help express the purulent drainage from the infected gland. Lid scrubs with saline or mild shampoo (e.g., baby shampoo) that is tear-free and pH-balanced, may promote drainage by clearing debris from the clogged duct. Soap may also help to remove bacteria by breaking down cell membranes, and it may also treat an underlying cause of the external hordeolum.¹ Persistent lesions or larger lesions may require antibiotic therapy. This treatment may help to shorten duration and severity. A macrolide antibiotic ointment such as erythromycin

ophthalmic ointment is often used and has the added benefit of lubrication. If the swelling is significant and causing pressure on the cornea, topical steroids can be used for a short duration. If the infection spreads and progresses to a periorbital or orbital cellulitis, systemic antibiotics are required.⁶

CONCLUSION

Dyslipidemia is one of risk factors associated with recurrent hordeolum. The management of hordeolum is conservative.

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